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Original Department.

Communications.

"TRANSPARENT TREATMENT."

A NEW INVENTION FOR THE CURE OF BURNS AND OTHER AFFECTIONS OF THE EXTREMITIES.

By Samuel W. Francis, M. D.,

(Fellow of the New York Academy of Medicine.)

The accompanying drawing and description of a new apparatus, invented by me, is for the treatment of burns and other affections of the extremities, and which may prove of benefit to the profession.

As may be seen by the engraving, the scalded arm is placed at once in the glass glove; each finger finding its own division, which, though separate, is joined externally like a mitten, to prevent breakage; and water dressings, lime water, or kreasote water, etc., allowed to flow in from the upper stop-cock; an india rubber band or its equivalent preventing its exit. By this means every portion is effectually bathed in the fluid used, and the attending physician is enabled to examine, at all times, the injured member without disturbing it, or exposing the surfaces to the action of the air. If it be desirable at any moment to draw off the water, etc., by turning the stop-cock at the end of the little finger, it at once flows freely. Glass can be made sufficiently strong to prevent its being broken by ordinary usage, as it is very desirable that the limb be kept still. Three sizes would fit almost any grown patient, and for children, a smaller arm could be in readiness.

I claim, moreover, that by the use of this glove, or boot, if it be the leg that is injured, water or its equivalent could be forced in by a pump, with sufficient power to produce pressure, which at times is very desirable.

Besides this, a new plan of treatment could be adopted which might at first seem beyond reason. I speak of introducing gases, vapors and their equivalents for the cure of burns, ulcers, and similar affections. Many arms are materially injured by the adhesion of the bandages to the sores, and not infrequently sphacelation is found to have commenced upon the surgeon's removing the covering from a flayed hand. These and many other thoughts arise in connection with the benefit of this "transparent treatment," but enough has been said for practical purposes, and I would feel grateful to hear the result of any case that has been submitted to this plan, which admits of many modifications.

Newport, R. I., Nov. 25, 1867.

A NEW METHOD OF ARTERIAL COMPRESSION BY A SECTIONAL LIGATURE.

More especially Designed for the Treatment of Aneurisms.

Read before the N. Y. Journal Association, Dec. 13, 1867.

By R. E. Van Gieson, M.D.,

Of Greenpoint, New York.

It is not necessary, in the few remarks that I shall make concerning what I believe to be a new method of arterial compression, to give in detail the various methods that have hitherto been employed for the restraining of hæmorrhage from accidental or surgical wounds, but in accordance with the established custom of the Association, it would, perhaps, be not inappropriate to give a very brief resumé of the more recent methods which have been, from time to time, recommended and applied. Up to the present time, the various means employed for this purpose can very concisely be included under three heads.

1st. Antedating the time of Ambrose Paré, the method of styptics and escharotics.

2d. Dating from the time of Paré, the ligature with all its subsequent modifications, as to material and method of application.

3d. Dating from the discovery of Sir James Simpson, the method called by him acupressure.

Of the first two divisions, it is foreign to our purpose to speak.

The paper of Sir James Simpson upon the subject of acupressure was presented at the first winter meeting of the Royal Society of Edinburgh, held on Monday, the 19th of December, 1859. The proof-sheets of that communication were sent by the author to Prof. George T. Elliot, and by the latter read before the Academy of Medicine, at the meeting of January 19th, 1860, and published in the proceedings of the Academy in the Medical and Surgical Reporter for January, 28th, 1860, a little more than a month after the illustrious author had first made known his now celebrated method, and in this way was first brought to the notice of the profession in America.

In publishing these proceedings, the following repertorial note was made.

"Dr. Simpson's paper will probably be made the subject of a future discussion in the Academy, and meanwhile, the profession have an opportunity to put his mode to the test. *Theoretically*, we could raise various objections against the application of acupressure, the chief of which is that it can never be employed in large arteries, as the femoral, etc., without subjecting the accompanying nerve, as well as the veins, to nearly the same amount of pressure as the artery sustains; and it is questionable whether the advantage gained from the pressure upon the artery by this means will not be overbalanced by the disadvantages from pressure upon the nerve, and the impediment to the return of blood by the pressure upon the vein. All this, however, must be determined by clinical observations." The opinion which I then ventured to express, has not been materially altered by the many results which have been published up to the present time. I am not aware that American surgeons have, as a rule, been able to report as favorable results from this method as the immediate adherents of its author. The results of Dr. Hutchinson, given at one of the recent meetings of the Pathological Society, were certainly not such as would induce one to repeat the operation. In one of his cases, the stump became so swollen in the course of forty-eight hours, that he was obliged to loosen the sutures, and when he did so, bloody serum and pus oozed from the wound. In the other case, about a drachm of blood escaped when one of the needles was removed. At the same meeting, Dr. Markoe's language was strongly condemnatory. He said that he had used the method in two cases, in conjunction with Dr. Van Buren, and that it was attended with so much irritation and suppuration, that he was disgusted with it altogether, and had never since repeated the operation. Acupressure, whether as successful as its author claims, or not, marks the transition from the idea of total or partial constriction of an artery to that of total or partial compression.

Modified Acupressure.

Mr. John Dix, of Hull, in 1862, proposed a modification of Simpson's method, which

he calls the wire compress. The method consists in placing a wire beneath the isolated artery, bringing the ends outward through the surrounding integument, and then bringing the ends over a needle or probe. He relates a case in the *Medical Gazette* for December 30th, 1865, in which this method was applied to the carotid artery. "By the wire," says Mr. Dix, "obstruction to the circulation was gradually effected; the flow of blood was not completely cut off until the third day. On the sixth day the wire was removed. Meanwhile it had not interfered with the wound, nor damaged the coats of the artery. On the tenth day the patient was convalescent."

Mr. Teale tried the same method* in a case of popliteal aneurism. The compress was applied to the femoral at the apex of Scarpa's triangle. The ends of the wire were brought over a wedge of cork, and compression kept up for eight days. At the end of this time the cork wedge was removed, but the wire was allowed to remain. On the tenth day, the treatment was renewed by the insertion of another wedge. On the sixteenth day, pulsation had ceased in the tumor, and the wire was withdrawn. On the twenty-third day, erysipelas set in at the wound and the punctures made by the wire; abscesses soon formed in the knee and calf of the leg, and death followed at the end of the eleventh week.

Mr. Teale thinks that where consolidation is deferred, (as in the preceding case,) that this method possesses no advantages over the ligature, as it will finally, like the ligature, cut its way through the artery.

Dr. Sands, in the meeting of the New York Pathological Society for Oct. 23d, 1867, related a similar case. The wire was here applied to the femoral artery, and the ends brought over a compress. He did not recollect the progress of the case, but the patient died not long after, from diffuse cellular inflammation of the limb.

At the same meeting, Dr. Markoe related a case in which the wire was applied to the subclavian artery, by Mr. Porter, of London. The ligature was tied over a probe outside of the wound. At the end of fifty-six hours, he was doing well.

The final result of this case is given in the surgical summary of the *New York Medical Journal* for December, 1867, from which it appears that, although the pulsation in the tumor was arrested in the beginning, it returned at the end of three weeks, and soon became as strong as before the operation.

On July 31st, as the disease was increasing rapidly, Mr. Porter determined to attempt a cure by placing direct pressure on the innominate artery. Instead of using the needle and wire, as before, he employed an ingenious instrument, invented by Dr. L'Estrange, which somewhat resembles a double aneurism needle without eyes. It is furnished with a movable handle. One blade is first carried under the artery, and the second is then carried down to the vessel, and made to compress it. The blades are approximated by means of a screw, and when closed sufficiently, the handle is removed, leaving the needle in the wound. The pulsation in the tumor was arrested, and on Aug. 2d, the needle was removed, but pulsation returned strongly in the aneurism. This is probably the first case on record, in which occlusion of the innominata has been attempted by pressure without ligation.

The Metallic Snare of Professor Smith.

Still another method of securing arteries, differing only from the ligature in the method of its application, and convenience of removal, is the "metallic snare" of Professor Smith, a description of which is given in the *N. Y. Medical Gazette*, vol. 1, No. 4. October 19th, 1867.

In this method, an annealed iron wire is placed around the artery, and the ends slipped through a silver tube. It, of course, has to cut its way through the artery before it can be removed, and therefore possesses no special advantages over the ordinary ligature.

Compound Acupressure.

Dr. Aitken, of Tekonsha, Michigan, calls by the preceding name a plan described in the *American Journal of Medical Sciences* for July, 1865. In this method the artery is to

* Lancet, Jan. 5th, 1867.

be compressed for a period of between six and twenty-four hours between two needles, two or three inches long, of the size of common darning needles, or smaller, of steel, soft tempered in the outer portion, so as to be readily cut. The extremity of one has an eye bent in a short curve, and the end of the other has a notch to interlock with the needle containing the eye. The needle with the eye is first passed under the exposed artery, until the notch of the second can be engaged in it, they are then appproximated sufficiently to bring together the inner walls of the artery, and so obliterate the channel. A few turns of silk are wound around the terminal ends, and the projecting point cut off with nippers.

Dr. Aitken does not state that he has ever tested his method, either in the human subject, or upon any of the lower animals. Without a knowledge of Dr. Aitken's method, I some time ago tried a similar plan upon elastic tubes imbedded in muscular tissue, and after numerous failures, rejected it as impracticable, on account of the uncertainty of removal. Experimenting in the same direction. I arrived at the present method, which is radically different in construction, but involves the same principle. I have called it arterial compression by means of a sectional ligature. Acupressure it is not, for needles are in no way concerned in its construction. Perhaps a better name for the instrument would be "the tube compress." The apparatus consists of two slightly tapering silver tubes and a connecting medium of silk, iron wire, or silver wire At their internal or arterial extremities, the tubes have a certain amount of curve, depending upon the circumference of the artery to be included. The aperture at the arterial points of the tubes is almost capillary in size, being only a trifle larger than the wire which is to pass through it. This aperture is situated as near as possible to the side of the tube lying furthest from the artery, so that the bottom of the tube is nearly solid where it lies in contact with the artery.

At the external ends of the tubes, a screw can be easily adapted, by which pressure can be graduated to any desired degree. In the figures, the graduation of the pressure is seen to be obtained by means of a wedge.

Method of Application.

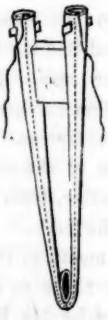
An ample supply of wire is first passed beneath the exposed artery, and the ends brought out at the incision; over each end of the wire, one of the tubes is now passed down to the vessel, and their internal extremities brought in contact. The protruding wire is now abruptly bent over the end of each tube, and the external ends of the tubes brought together by means of the screw, or the ends of the wire may be wound around a wedge of cork between the tubes, by altering the position of the wedge, or by turning the screw the amount of compression desired is obtained.

The removal of the apparatus may be accomplished in one of two ways, according to the depth of the artery. If the artery is quite superficial, the end of the wire over one tube can be cut, the tube of the same side removed, and afterward the other tube with the wire attached (Fig. 3); but if the artery is deep seated, let *both* tubes be firmly held by a clamp, now cut

Fig. 1.

The compress ready for application.

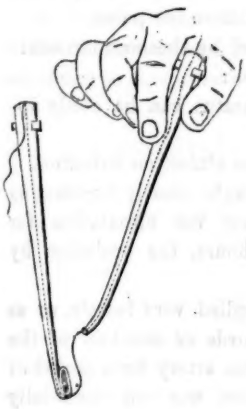
Fig. 2.



The compress applied.

off the end of the wire over one of the tubes, and seizing the other end of the wire, draw it steadily through the whole length of both tubes; the latter are now free and can be easily withdrawn (Fig. 4).

Fig. 3.



Removal by the first method.

Fig. 4.

Removal by the second method.

This apparatus is more especially designed for the treatment of aneurism, and since it is now generally admitted, and indeed taught, that it is by no means necessary for the whole of the circulation through an artery, to be either entirely or permanently arrested to secure coagulation in the sac, the belief is justified that such an apparatus, presenting neither difficulty in application nor removal, may possibly aid in securing the desirable result, without the irritation and suppuration which have, with occasional exceptions, attended other methods of procedure.

I have made but two experiments with this apparatus, and those under many provoking difficulties, both as to the obtaining of proper subjects and the sustenance of the animals after the operation. The suject chosen in the first instance, for want of a better, was a young calf, certainly not much more than ten days old. With the assistance of Dr. Hawley, the right carotid was exposed on the first of December, and the whole apparatus easily adjusted. An attempt was made to include a part of the sheath between the tubes, whether his was done or not, I cannot certainly say, as my fingers were almost frozen by the intense cold of the day. The tubes having but a slight curve, were brought closely together at 11 A. M., but whether the current was completely arrested or not, was another point very difficult to determine, as the artery pulsated but faintly before the compress was applied. I learned after the operation that the animal had been kept since the preceding Friday, without either food or drink. On the following Wednesday morning, at 11, A. M., the ligature was removed by the second method. The wire broke near the point of the internal junction of the tubes, though only a slight degree of traction was exerted. The tubes were then withdrawn without the slightest difficulty, not a single drop of pus escaped from the wound, nor has there been any evidence of irritation during the whole time in which the tubes have been in contact with the artery. After the operation the nearly famished animal was abundantly fed with milk, and took his meals with an appetite which could well be called ravenous. On Wednesday evening the animal, contrary to my directions, was unfortunately through some mistake slaughtered, and the carcase mutilated before I could get an opportunity to dissect the parts. I succeeded, however, in finding the portion of the artery compressed, and it would seem from its appearance that the apparatus had cut its way through, an effect, however, that may be due to a post mortem accident. The ligature had certainly not cut its way through at the time of removal, because the tubes could not then be withdrawn until the wire had been taken away. On Tuesday evening, at 10, P. M., the tubes could be seen to pulsate, a sufficient evidence that the artery was then at least, intact. For these reasons I am inclined to think that the artery was not really severed at the time of death.

As a rule we rarely see the artery completely divided sooner than the sixth or seventh day.

Whether the tender age and exhausted condition of the animal might have hastened such a result, I am not prepared to say. On examining the specimen, the occlusion by coagula is seen to be perfect.

A second operation, under more favorable circumstances, was performed on Tuesday, the 10th of December. The subject in this instance was again a calf, but much older and more vigorous than the first.

With the aasistance of Dr. J. S. Hawley, the right carotid was exposed, and the tubes very loosely applied at 1 P. M. A wedge of cork was inserted between the external extremities of the tubes. The intention in this case was partially to diminish the current of blood without inflicting damage upon the arterial coats.

A portion of the sheath of the artery was certainly included between the tubes. Slight pulsation could be felt above the compress, showing that the circulation was not completely arrested.

The caliber of the artery was certainly not diminished more than two-thirds, perhaps not more than one-half.

The animal was occasionally observed for a period of thirty hours, during which time it did not appear to suffer the slightest inconvenience from the presence of the apparatus.

At the end of thirty hours the instrument was easily removed by the second method. The wire slipped readily through the tubes without breaking.

Two hours afterward the animal was killed in my presence. As soon as life was extinct, the parts were carefully examined. The wound was completely glued together by plastic exudation at every point except where the instrument had been placed. On separating the edges of the wound, about a drachm of perfectly limpid serum escaped.

There did not appear to be any more inflammation than one would reasonably expect from the effects of the operation necessary for the exposure of the artery. On reaching the vessel a slight sulcus was observed, indicating the point where the instrument had been applied. Just beneath this sulcus there was a slight ecchymosed spot about the size of a pin head, produced, perhaps, by the continued pulsation of the internal extremities of the tubes at that point.

A section of the artery three-fourths of an inch above and below the point of compression was then removed. On opening the artery there was no evidence of occlusion, or any attempt at the formation of coagula. The whole internal surface of the artery was smooth and glistening, and it would have been difficult to determine where the compression had been exerted, had not the sulcus upon the surface served as a guide to the point.

The facts established by these experiments would seem to be these:

1st. That the apparatus can be easily applied and removed.

2d. That it produces almost no irritation.

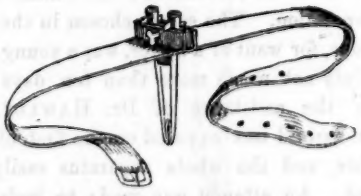
3d. That when brought closely together so as to completely arrest the circulation for a period of seventy hours, the occlusion by coagula was perfect.

4th. That when applied very loosely, so as to arrest only two-thirds or one-half of the circulation through the artery for a period of thirty hours, the vessel was not materially damaged, nor was there any attempt at the formation of the coagula.

I am, of course, unwilling to make any deductions from this limited course of experiments. Future and more guarded operations upon the lower animals will perhaps justify the trial of the apparatus on the human subject, where, with the advantage of intelligent co-operation upon the part of the patient, we will be enabled to judge of its fitness or unfitness for the treatment of aneurismal tumors. When we consider that coagulation can be produced in an aneurismal sac *without occlusion* of *the artery* at the *point* of *ligation*, the use of the instrument is perhaps justified.

In the application of such an apparatus to the human subject, a single precaution would be necessary, the weight of the tubes should not be allowed to press downward beneath the

Fig. 5.



included artery; to obviate this, a strap, with a clamp to hold the tubes in position, could be

adjusted to the part. The same contrivance would aid in the removal of the wire by holding the tubes firmly in their place.

The advantages which seem apparent in this apparatus are,

1st. Ease of adjustment.

2d. Ease of graduating the pressure.

3d. Ease of removal.

4th. No tissue except that of the artery is subjected to compression.

Hospital Reports.

Jefferson Medical College,
December 4th, 1867.

Surgical Clinic of Prof. Gross.

Reported by Dr. Napheys.

Sebaceous Tumor.

Mrs. F., æt. 70. This patient has a tumor upon the back part of the head, between the ear and the middle line. The hair over it is a little sparse; there is no discoloration of the skin. It has been nearly as large as it is now for two years. It was first noticed six or seven years ago. There has been no pain in it, but of late it has been the seat of violent itching. The cause of its production is not known. There is now decided fluctuation present.

This is a sebaceous tumor, for which excision is the only remedy. The long diameter being transverse, the incision was made slightly oblique. The contents were entirely too soft for enucleation; therefore, the cyst was laid open, its contents turned out, and the cyst itself removed by peeling it off. If the contents had been solid, there would have been no difficulty at all in effecting enucleation. The cyst is remarkably thin for a tumor of this kind, of such long standing, in this situation. The inner surface, that in contact with the contents, is perfectly smooth, while the external is rough, having been connected by cellular tissue with the surrounding parts. A portion of the cyst is in a state of osseous or earthy degeneration.

The parts were brought together with a few interrupted sutures. No vessels required ligation. Sometimes it is necessary to tie three or four arteries in this situation, especially when the tumor is of long standing and of considerable bulk. Occasionally, in these cases, there is secondary hemorrhage.

The danger after such an operation as this is erysipelas, which may come on in the next forty-eight or thirty-six hours, usually within a very short time. It is frequently ushered in by a chill, followed by a fever, and this in turn by perspiration, disorder of the digestive apparatus, as well as of the secretions at large, and by a pink or scarlet discoloration of the part, which spreads more or less rapidly over the surrounding structures. She was ordered to be kept in a warm room, and to have plain, simple, nourishing food.

Carcinoma in Child.

Thos. T., æt. 6½ years. The middle finger of the right hand of this boy is almost in a gangrenous condition. The discharge is very thin and offensive. The finger presents an immense fungous mass, one would suppose it impossible for a finger to acquire such a bulk. It has been so large for a month, and the affection has existed for five months.

This case may have been originally nothing but onychia maligna. As it now presents itself, Professor Gross is disposed to believe it is carcinomatous; he has never seen onychia maligna with such a frightful appearance. It has every external characteristic of cancer.

The child complains of a great deal of pain. His suffering is worse at night, preventing him from sleep. His general health is much impaired; he looks thin; his countenance is expressive of suffering. No appetite, tongue somewhat coated.

The only remedy for this affection is amputation of the finger. The child was put under the influence of chloroform, and amputation effected. The prominent portion of the knuckle was cut off. Notwithstanding, the parts have been so long in a state of irritation and inflammation, there was no disposition to bleed. Ample covering was obtained, two good flaps, anterior and posterior, the shorter corresponding with the palmar aspect.

If the affection be carcinomatous, as there is every reason to believe from the appearance of the part, and from the history of the case, it is probable there will be a return of the disease in some portion of the hand, necessitating amputation at the wrist or of the forearm.

December 7th. Microscopic observation has confirmed the diagnosis. It will be interesting to watch the progress of this very rare case, to see if there be any development of cancer hereafter.

Epithelioma of Face.

Jas. P., æt. 51. For nine years he has had a sore between the inner canthus of the eye and the nose on the left side. It healed about three years ago for nearly three months, but ever since

it has been an open sore. It is the seat of a stinging, sharp, shooting pain, very frequently of an itching character. The edges of the ulcer are steep, everted, and ragged, and the bottom is bathed with a sort of thin, sanious, slightly yellowish fluid. There are some granulations, but they are not healthy. The edges are hard and a little puckered. His general health is good; he sleeps well; has lost no flesh; tongue coated; bowels regular.

This, without doubt, from the history of the case, and the appearance of the part, is epithelioma, cancroid, epithelial cancer, or cancer of the skin, as it has been variously called. It is somewhat doubtful as to what shall be done. The disease is an exceedingly difficult one to reach in any way. When it involves the lip, the affected portion is removed; when it invades the penis, that organ is amputated, and so with reference to other parts of the body, which are accessible to the knife. Here it cannot be employed with advantage, there being no room. The tumor involves the inner canthus of the eye, both lids in this situation, and extends to a considerable depth, apparently nearly as far as the lachrymal sac. A caustic might be employed. Vienna paste would probably be the best; caustic potassa is very severe, as are also corrosive sublimate and arsenic, and chloride of zinc, the most powerful of them all. The actual cautery is much to be preferred to these caustics, for the removal of the diseased structure, and at a future clinic it may be applied. In the meantime, the dilute ointment of nitrate of mercury, one part of the officinal ointment to eight of simple cerate will be used. He was also ordered five grains of blue mass, and two and a half grains each of aloes and jalap at night, and directed to abstain from meat, cabbage, etc., to eat nothing but plain, simple food. Sometimes a great deal can be done in staying the progress of this kind, simply by attention to the bowels, diet and secretions.

Sciatica.

Mr. B., æt. 40. This is a case of neuralgia, of deep interest. For three months he has suffered pain in the hip, which runs along the back of the thigh, and extends down to the toes along the posterior part of the limb. The pain is sharp, shooting, burning in character. It is continuous, most severe at midnight when it wakes him and deprives him of sleep until morning, when he rises unrefreshed. It came on gradually after exposure to damp weather. His tongue is clean and appetite pretty good. He has had rheumatism; never been affected with chills and fever. Of late he has lost flesh. Pressure over the lower spinous processes produces pain, which runs down into the toes.

The man says he has been repeatedly cupped and blistered, and taken internally arsenic, strychnia, quinine, iron and morphine. Morphia injected under the skin has relieved him for an hour or so, but then the pain returned.

He was ordered the following ointment:

℞. Veratriæ, ℥j.
Cerati simplicis, ℥j. M.

of which a piece as large as a cherry is to be rubbed in freely three times a day along the course of the sciatic nerve. The ointment, in this strength, is a very powerful anti-neuralgic. Internally, he was directed to take ten grains of quinine, and one-half a grain of morphia, made into three pills, at six o'clock in the evening. The following prescription was also given:

℞. Quiniæ sulphatis, gr. iij.
Strychniæ, gr. 1-24.
Acidi arseniosi, gr. 1-20.
Extracti aconiti, gr. ½. M.

in pill, three times a day.

Powerful counter-irritation would be of service, and the actual cautery would be a proper remedy under such circumstances, applying as soon as the eschar drops off, morphia, strychnia and other remedies endermically. If the bowels should become costive, he will take five grains of blue mass, and three of jalap, made into two pills, at bed-time.

Alleghany County Medical Society.

At a meeting of the Alleghany County Medical Society, held recently, in the University building, the following officers were elected for the year 1868, viz.: Dr. A. M. Pollock, President; Dr. Wm. F. Knox, Vice President; Dr. W. Snively, Corresponding Secretary; Dr. B. C. Jillson, Recording Secretary; Dr. E. Umbstaetter Assistant Recording Secretary; and Dr. John Semple, Censor. Also, eight delegates to the American Medical Association and sixteen to the State Medical Society. The society is in a flourishing condition, and has seventy-nine *bona fide* members and twenty-one members elect who have not yet signed the constitution.

—— Cheering. The English papers state that the personal beauty of Prince Arthur will not be impaired by the attack of small-pox from which he has just recovered. The application of chlorodyne to the vesicles on his face during the eruptions is the cause of this immunity from the usual consequences of the disease.

Editorial Department.

Periscope.

THEN AND NOW:

A Discourse Introductory to the Course of Lectures in the Jefferson Medical College of Philadelphia, by S. D. Gross, M. D., Oct. 14, 1867.

(Published by Request.)

Two-and-forty years have elapsed since this school, named in honor of the immortal author of the Declaration of Independence, was opened for the instruction of medical students; and how well it has repaid the pains, the cares, and the labors of its founders, its faculties, and its guardians, every one acquainted with the progress of medical teaching in this city are aware. That it had, as all similar institutions, to some extent at least, must have, its early struggles, its trials, and its difficulties, nay, even its dissensions and domestic broils, is a matter of history; how it triumphed over them, and eventually, at no distant day, achieved its proud and commanding position, is also known. From the time of its reorganization in 1841, the date of its permanent stability and glory, its classes rapidly increased in numbers until 1860, when there were assembled around us 630 pupils, representing the different States and Territories of the Union, the British Provinces of North America, and several of the proud States of the Old World. War is hostile alike to the peace of nations, and to the prosperity of scientific and literary institutions, and it would indeed have been strange if the Jefferson Medical College had altogether escaped its late malign influences. The surprise is, not that it should have suffered, but that it suffered so little. Of the founders of the school, the original faculty whose names are attached to my diploma, not one is left; while of the faculty which came into power in 1841, and to which the college owes so much of its present renown, only two remain to adorn their chairs, and to cheer on their younger colleagues in their efforts to perpetuate its prosperity and to extend its usefulness. Of these, one, the honored Nestor of the school, will, as usual, greet you with his presence this winter, and enlighten you with the riches of his knowledge; the other, unfortunately, is absent, seeking in a foreign clime the repose which he so much needs after the toils and fatigues of more than twenty-five years, faithfully spent in the service of the institution.

My colleagues, whose representative I am on this occasion, have imposed upon me the agreeable duty of welcoming you to the Halls of my Alma Mater, and of speaking to you a few words of advice and comfort; of advice, as a guide to your studies and to your conduct in the lecture-room; of comfort, to encourage and solace you during the period of your separation from your homes and friends. But before I proceed to this subject, I desire to call your attention to another, replete, if I mistake not, with interest and instruction, and therefore well calculated to serve as an introduction to a course of medical studies. I allude to the changes and improvements which have taken place in medical science since my entrance into the profession in 1828. The merest glance at these topics is all that can be attempted within the brief space allotted to my discourse.

The advances in our knowledge in medical science within the last forty years are without a parallel in any age. Never was the medical profession so busy and industrious, so zealous and enthusiastic, so honest and exact in its views and its results, as it is at the present moment. It would almost seem as if the millennium were actually close at hand. Look where we may, progress, rapid and brilliant, nay, absolutely bewildering, literally stares us in the face, and challenges our respect and admiration. One is almost ready to exclaim, "Behold, all things are new!"

The age is proud of its knowledge. It boasts of it in the public prints, in the workshops, in the social circle, in the street, everywhere, in season and out of season. It has a hundred Newtons, a thousand Franklins. An age which has tamed the lightning, bridged the ocean with steamships, girdled the earth with telegraphic wires, and made everything, organic and inorganic, subservient to its convenience and enjoyment, has just cause to be proud of its achievements; and yet it would ill become it to be arrogant and conceited, or unmindful of the fact that much of this knowledge, so much boasted of, is an inheritance, a reflection of the past, a legacy transmitted from sire to son, an accumulation of the industry, the genius, and the wisdom of other days, crowned with glory, and sometimes even with martyrdom. We are too much disposed to look with contempt at the knowledge of our predecessors, as if, in reality, they had worked and lived in vain, as if all true science had been reserved as a kind of special gift to the present generation. If a thick veil

could be suspended between the past and the present, separating them completely from each other, it would be easy to see where we should be. Utter darkness would cover the face of the earth. The giant would be a dwarf. The sun of science would be overhung with clouds and shadows, without one star to guide and direct us in our labors. All the experience of Hippocrates, of Sydenham, of Hunter, and of Bichat would be lost to us; the Newtonian system would be blotted out; civilization would be thrown back a thousand years; and the human mind would lapse into barbarism of the worst kind. Knowledge is progressive; it marches by slow degrees; the seed that is sown to-day may not germinate, much less fructify, for centuries. It may lie dormant in the earth, until chance or accident brings it forth in full vigor and perfection. The fall of the apple had been witnessed thousands upon thousands of times, but it required the genius of a Newton to deduce from it a general law, pervading all matter, all space, from the most minute atom to a world, the abode of millions upon millions of human beings. The human body had been dissected for ages, but no one, until the time of Bichat, the apostle of general anatomy, had studied the tissues, and applied the knowledge thus acquired to the elucidation of pathology and practical medicine. Linnæus, in the last century, was the first to offer a rational classification of plants; and it was not until a much later period that Cuvier gave us the first idea of the nature of the vast chain which connects, in one unbroken whole, the animal kingdom. The discovery of the cell is the work of our own day.

We look at this curtain as it is waving faintly in the distance, and thank God that it cannot shut out from us one ray of light. The past and the present are one and indivisible. Individuals perish and pass away, generation succeeds generation, but mind and its products live forever.

Commencing our examination with the great department of descriptive anatomy, it will be found that fewer additions have been made than in any other branch of the medical study during the last third of a century. The treatises of Boyer, Hildebrandt, and the two Cloquets, published shortly before, or soon after, the commencement of my pupilage, almost exhausted the subject; and any gaps which they have left have since been thoroughly filled by the unrivalled, classical works of Cruveilhier and Quain; works which are an honor alike to their distinguished authors and to the nations which they respectively represent. Descriptive anatomy has, in fact, attained its ultimate limits of perfection. Like Alexander, the dissector may weep that there are no more new conquests for him.

What is true of descriptive anatomy is equally true of surgical, relative, regional, or topographical anatomy, founded by Desault and John Bell, in the latter part of the last century, and so thoroughly worked up in this, especially by Velpeau, Maclise, Malgaigne, Morton, Richet, Jarjavay, and Hyrtl. It is questionable whether the most painstaking man, however earnestly or zealously engaged in dissections, could add one particle of real value to the knowledge which now, thanks to the labors of these and other anatomists, exists upon this subject. The exploration has been most complete in every direction.

The anatomy of the tissues, commonly known as general anatomy, or histology, first systematically studied and described by Bichat, at the dawn of the nineteenth century, has also nearly, if not entirely, attained its highest degree of perfection. Future observers may correct some portions of our knowledge, but it is not probable that any very important additions will be made to it, however patiently and earnestly they may prosecute their investigations.

When we reflect upon the vast importance of this science, and upon the great revolution it has affected in physiology, pathology, and practical medicine, we are struck with wonder and amazement to find that it was, in great measure, the result of the labor and genius of a single individual, and our surprise is not a little increased when we learn that that individual perished at the early age of thirty years, a victim to excessive toil and boundless enthusiasm.

Marie Francis Xavier Bichat, the founder of this science, was one of the great master spirits of his age. His gigantic mind grasped, with equal power, anatomy, physiology, pathology, medicine, and surgery. The fire of his composition, often, like that of his great prototype, John Hunter, neither elegant nor correct, his profound knowledge of the structure and functions of the human frame, and the novelty and boldness of his enunciations, left him without a rival. Evoking order out of chaos, he enriched and fertilized the commencement of the nineteenth century with the great variety and vast extent of his discoveries, and accomplished in a few short years the work of a long lifetime. Prior to his time histology had no veritable existence. If it had, as some have alleged, been foreshadowed by the labors of Bordeu, Pinel, and Carmichael Smith, it lacked the proportions and finish of the

stately science which it assumed in the hands of the illustrious Frenchman.

The death of BICHAT was a national calamity. CORVISART, in announcing the sad event to BONAPARTE, then first consul, observed: "BICHAT has fallen on a field of battle which numbers many a victim; no one has done in the same time so much and so well." Besides his great work on general anatomy, written and published within less than two years, he left a monograph on life and death, a system of descriptive anatomy, in four volumes, and a number of valuable papers as contributions to the periodical press. He also edited, with notes and commentaries, the surgical tracts of DESAULT, and composed a small treatise on pathological anatomy, which was given to the world after his death. Such was BICHAT, who, had his life been spared a few years longer, would have become the most illustrious physician and medical philosopher the world has ever produced.

The only work on pathological anatomy, accessible to the American student, in my early professional life, was that of Dr. MATHEW BAILLIE, who for many years stood at the head of the medical profession of London, where, after a life of great usefulness and honor, he died, in 1824. It was comprised in a small octavo volume, illustrated by an atlas of plates, the former of which was republished in this city soon after its appearance in Great Britain, and served for a long time as the only guide to the study of morbid anatomy in this country. The work of BAILLIE was succeeded, in 1829, by the treatise of Dr. WILLIAM E. HORNER, Professor of Anatomy in the University of Pennsylvania, and this, in turn, by the Elements of Pathological Anatomy, by the present incumbent of the Surgical chair in this College. Since that time works, almost without number, some of them, as those of CRUVEILHIER, CARSWELL, and LEBERT, of the most magnificent and costly character, have appeared, and have served to elevate the study of morbid anatomy to the highest position among the kindred pursuits. If BONNETUS and MORGAGNI, the founders of this science, could rise from the dead and witness the astounding progress which this department of human knowledge, so essential to a correct interpretation of the nature and seat of disease, has made within the last thirty years, they could not accuse their successors either of neglect or indifference in this respect. Although the field is still open, inviting further research, the clouds which so long overshadowed it have been effectually dispersed, and have revealed a glorious sunlight, the rays of which have pierced every recess of the healing art with their benign and renovating influence.

The most curious and interesting discovery in anatomy in modern times is that all animal and vegetable substances essentially consist of cells, of variable size, shape, and structure, and so minute, as to be visible only with the aid of the microscope; an instrument first applied as an aid to anatomy by LEUWENHOECK in the seventeenth century. A number of observers had long ago suspected the existence of such bodies, but it was not until the researches of SCHLEIDEN, in 1837, and those of SCHWANN, a little later, that the fact was fully and satisfactorily established. This discovery, with the progress of which the name of a young American physician, long since diseased, Dr. WALDO J. BURNETT, of Boston, is honorably associated, has led to vast changes in our anatomical and physiological knowledge, and to the adoption of certain views in pathology, the extent and importance of which no human sagacity is at present able to penetrate. The cellular pathology has already, under the plastic genius of VIRCHOW, of Berlin, awakened a vast deal of inquiry, rapidly pushed on by men of the highest capacity in all parts of the civilized world. The cells of the human body exist not only in the natural tissues, but also in abnormal growths, and one of their characteristic features is their wonderful power of proliferation, by virtue of which they multiply with extraordinary rapidity, both in health and disease. The doctrine of the schools now is that everything emanates from a cell—*omnis cellula e cellula*; that is, where a new cell is, there must have been a cell previously, "just," to use the language of the German professor, "as an animal can spring only from an animal, a plant only from a plant." These researches, the result of the successive improvements of the microscope, and of a more careful application of that wonderful instrument, which has endowed man almost with a new sense, have clearly demonstrated the cellular nature of all vital processes, vegetable and animal, physiological and pathological, and the unity of life in the elementary forms of all organized beings, if not also the unity of disease in all organs and tissues.

If, at the commencement of my professional life, there was any one department of medical science in a more unsettled and unsatisfactory condition than another, that department was physiology, and it cannot be denied by any one at all familiar with the subject, that much of the uncertainty which then enshrouded it, still continues, notwithstanding the vast amount of labor,

talent, and genius, expended in efforts to elucidate it. It is a department which, to borrow the language of Lord Bacon, in reference to medical science in general, has been more labored than advanced. Nor need this at all surprise us. The secrets of nature are not easily unlocked. She is slow in unveiling herself to the gaze even of the most patient, zealous, and philosophical inquirer. Her modesty shrinks as the maiden at the approaches of her lover. She loves to flirt and to coquet with her votaries, and not unfrequently blinds and disappoints them upon the very threshold of some grand discovery.

Our knowledge of certain portions of physiology was as perfect thirty years ago, as it is at this moment. No real light, for example, has been thrown upon the mechanism of the circulation of the blood in the heart and large vessels, as disclosed by William Harvey in 1629. He literally exhausted the subject. Concerning the circulation of the blood in the capillaries, and even of the structure of these tubules, our knowledge is to-day very little, if any, in advance of what it was a third of a century ago. Of the functions of digestion, respiration, calorification, and generation, not to mention others, a similar remark may be made.

The greatest advances that have been made in recent times in physiology relate to the functions of the nervous system. Within the last twenty years, many facts have been explained that were formerly entirely unknown. When I attended my last course of lectures in this school, the brilliant discoveries of Sir Charles Bell and Magendie just began to attract the attention of the medical teachers in this country, and I well remember with what enthusiasm the professor of anatomy and physiology dwelt upon the genius of the two men who were thus gradually opening to the gaze of their professional brethren a mine of incalculable riches to medical science. It required the labor of ages to determine the interesting and important fact that the two sets of nerves, emanating from the brain and spinal cord, are endowed with different functions, one with the faculty of motion, the other with sensation, and yet the very arrangement of these nerves, and their peculiar mode of origin, would, one might now suppose, have, generations ago, furnished a satisfactory clue to this fact, without any necessity for the elaborate experiments that were performed by the English and French philosophers. Of the nature of reflex-motor action, first brought under notice by Dr. Marshall Hall, and a knowledge of which is of such vast consequence in a practical point of view, nothing was known thirty-five years ago.

In 1847, Schrœder Van-der-Kolk discovered the wonderful law, of so much value in the application of electricity to the cure of muscular paralysis, that "whenever a mixed nerve furnishes fibres to a group of muscles, its sensitive fibres are distributed to the corresponding portion of the skin." Another valuable discovery has been made by Schiff. By a series of well-conducted experiments, he has proved that the "gray substance of the posterior fibres transmits the sensation of pain, while the white fibres are devoted to the transmission of tactile impressions." The knowledge thus elicited enables the practitioner at once to explain, in any particular case, the nature and seat of what is called locomotor ataxy, a peculiar affection of the spinal cord, liable to occur at all periods of life, both as the result of disease and accident. The discovery of the reflex-secretory action of the nervous system, a discovery almost as brillaint as that of Marshall Hall, above alluded to, was the work of our distinguished countryman, Professor Campbell, formerly of Georgia, now of New Orleans, by whom it was originally announced, in an able and elaborate paper read before the American Medical Association, in 1857.

If time permitted, reference might here very properly be made to many other recent discoveries in this department of anatomy and physiology, the value of which it is impossible even now to conjecture. The names of Brown-Séquard, Pannizza, Longet, Claude Bernard, Van Deen, Ludwig, Stilling, and Volkman, are indelibly identified with these important advances in this interesting branch of biology. Much of what is now obscure, and consequently imperfectly understoood, will, no doubt, ultimately be cleared up, not so much, probably, by experiments upon the inferior animals, at present so much the rage, as by careful clinical study, or, in more comprehensive language, by a more enlightened interpretation of the phenomena of morbid action, a method of inquiry which accomplished so much in the hands of Sir Charles Bell and Marshall Hall in unravelling the functions of the nervous system.

It is only a short time since the vitalists and the chemists vied with each other for the ascendency in physiology, the former referring all the processes in the animal economy to the operation of a living sentient principle, the latter almost exclusively to the effects of chemical agency. Here, as in nearly all other extremes, the truth lies in the middle. Nevertheless, there are, even now, notwithstanding our increased light, some who assert that the human body is a mere ma-

chine, wholly independent of vitality; that the circulation of the blood is a mere hydraulic operation, explicable by the ordinary laws of physics; that the lungs are nothing but a furnace for the consumption of oxygen and the generation of carbon; that the stomach is a mere laboratory, and digestion a purely chemical process; in short, that the brain is a storehouse for the manufacture of Dutch toys and Yankee notions.

In chemistry, how vast the changes since the time of Gay-Lussac and Thénard, the founders of modern chemistry! Forty years ago, organic chemistry had a vague and undefined existence; its facts were comparatively few and undetermined. To-day it presents a bold and majestic front, with the word "Progress" inscribed upon it in large and indelible letters, its destiny being indissolubly connected with industry, agriculture, medicine, the fine arts, and humanity. It is, in fact, the great lever of human progress. To two men, more particularly, is the world indebted for the salutary impulse communicated to organic chemistry within my time—Baron Liebig, who made the little town of Giessen for years a centre of intellectual attraction, and Mons. Chevreul, of Paris, a man who has established for himself an imperishable reputation as a profound thinker and an original investigator.

My colleague, Professor Rand, has been so kind as to give me a synopsis of the more important improvements that have been made in chemistry since 1830. From this it appears that nearly all the apparatus now used consists of glass, cork, and caoutchouc. Volumetric and spectral analyses have been introduced; the former of marvellous rapidity and great accuracy, the latter of a delicacy before unthought of. By it the new metal, cæsium, was detected in a mineral water of which it could not have formed more than the 100,000,000th part by weight. It is the agency now employed for studying the composition of the sun and stars. An immense number of new compounds have been discovered, and the synthesis of over one thousand organic compounds effected. Chemical preparations, of uniform strength and efficiency, and of small bulk or slight taste, have, in many cases, replaced the cumbersome and uncertain Galenical preparations of the Pharmacopœia, as, for example, the alkaloids and their salts, now so much used in the treatment of disease. Iodine and bromine, although previously known, were not generally employed. Chloroform, discovered almost simultaneously in America and France, is of later date. The cause of contagion has been studied, and a rational system of disinfection established.

The manufacture of matches, gun-cotton, collodion, and gutta percha goods, the vulcanization of caoutchouc, and the invention of the telegraph, and of photography, are all due to the recent progress of chemistry. The application of chemistry to agriculture and physiology, by Liebig, Dumas, Mulder, Lehmann, and others, has completely changed the face of these two departments of knowledge. The researches of Von Meyer, Joule, Grove, Helmholtz, and others, have established the great doctrine of the correlation of force, and given the mathematical relation between heat and work. The undulatory theory of light has been physically proved by Fizeau and Foucault. The inquiries of Ohm have brought the laws of voltaic electricity within the domain of mathematics.

The materia medica has been purged of many of its crudities, and attained a more exalted position. The vast accessions which it has received consist, not so much in the addition of new articles, properly so considered, as in new combinations of many of those long known and accredited. Some idea of the remarkable changes that have been effected in this department, within the last thirty years, may be formed, when it is stated that my learned colleague, the Professor of the Institutes of Medicine, has written a large octavo volume of upwards of seven hundred closely printed pages, upon what are called new remedies. Every vegetable and mineral has been laid under contribution; chemistry has lent its power of analysis and refinement; and physicians, in quite a number of instances, as in the cases of Fountain and Hammond in our own country, have not hesitated to perform dangerous experiments upon their own persons, to test the virtues of the new candidate for favor and adoption into the family of medicines. Time would fail me if I were to attempt even an enumeration of the more important additions to our modern Pharmacopœia. The most valuable, unquestionably, are the preparations of iodine, potassium, bromine, iron, aconite, and veratrum viride, of the efficacy of which, in controlling morbid action, no one not familiar with their use can form any just estimate. The discovery of cod-liver oil has been a great boon. Employed freely in the earlier stages of phthisis, there is probably no remedy which exercises so salutary an influence over that ruthless disease in warding off the fatal issue.

One of the most remarkable discoveries of the age is that medicines introduced into the subcutaneous cellular tissue act much more speedily and forcibly than when taken by the stomach or the rectum. The operation is performed with a

small pocket syringe, the nozzle of which terminates in a very sharp point, so that the skin may be easily penetrated without pain. A patient racked by sciatica, gout, or cancer, is relieved in a few minutes by the hypodermic use of a third to a half grain of morphia. One grain of quinine thrown under the skin makes a much stronger impression in warding off an attack of malarial fever than five times that quantity introduced into the stomach. The probability is that we shall be able, ere long, to purge and vomit our patients by this simple and elegant method of medication, whose practical history extends back no further than 1859, when attention was first directed to it by Mr. Charles Hunter, in the London *Medical Times and Gazette* for that year.

In no department of the healing art has there been greater progress, with sound, healthful improvement, during the period under review, than in the treatment of diseases of the uterus, a class of affections really very little understood, even by the most enlightened practitioners, in the first third of the present century. The change has, indeed, been marvellous. Our knowledge of these disorders, so frequent in their occurrence, and in their consequences so harassing and distressing, was, until within a comparatively recent period, in a great degree conjectural. The only aid invoked in their investigation was the sense of touch, and even that was often rejected by the over-sensitive female from motives of false delicacy. The result may easily be guessed. As was the diagnosis, so was the treatment; if the one was erroneous, how could the other be correct? It is an axiom in medicine not to prescribe for a malady before we have ascertained its true nature and seat; and although this is not always practicable, yet the rule is not the less true.

The marvellous changes here referred to are all due, mainly, if not wholly, to the employment of the speculum, an instrument well known to the ancients, but long lost and forgotten. Delineations of it were found upon the walls of Pompeii and Herculaneum; and Paul, of Æginета, alludes to the dioptra, a form of speculum, as an instrument in general use in his time for examining the vagina and uterus. Ambrose Paré has given an account of a uterine speculum, accompanied with several drawings, in his great work on Surgery, published toward the close of the sixteenth century. Mention of it also occurs in some of the older treatises on midwifery. Through false notions, however, of professional delicacy it had fallen into disuse until restored in 1822, by Professor Récamier, of the Hôtel-Dieu, of Paris. In this country the speculum was first employed by Dr. Sharpless, of this city, in 1835, soon after his return from Europe, where, especially in the large venereal wards of Mons. Ricord, he enjoyed ample opportunities of witnessing its application, and of appreciating its great value as an aid in diagnosis. The practice met for a while with much opposition and even abuse. Now every one employs it.

Sounding of the uterus, as a means of ascertaining the existence of disease in its interior, is of still more recent date, hardly thirty years having elapsed since attention was first directed to it by Mons. Lair, of Paris. When we reflect upon the great value of these examinations, now universally practised, it is amazing that they should have been so long overlooked and neglected.

Dr. James H. Bennet, of London, nearly a quarter of a century ago, justly remarked that the discovery of auscultation and percussion by Avenbrugger and Laennec had hardly produced so great a change in thoracic pathology, great as that change has been, as the application of physical exploration in uterine diseases was destined to effect in this extensive and important department of medical science. This prediction, made in the true spirit of enlightened progress, was years ago amply verified. No educated physician now attempts to diagnosticate a disease of the uterus or vagina without the aid of the speculum. This instrument, so simple in construction, and so easy of application, has brought to our aid an additional sense in the investigation and treatment of this class of maladies. It has, in fact, produced not merely a change but a thorough revolution, alike honorable to the profession and of inestimable value to poor suffering woman.

The only monograph on female diseases, thirty-five years ago, accessible to the American student, was that of Dr. Dewees, even then far in arrear of the existing state of the science. On inflammation and ulceration of the uterus, as revealed by the speculum, the work was entirely silent; nor did it contain any information respecting the operative surgery of that important organ, a subject so admirably handled by Sir James Y. Simpson, Dr. I. Baker Brown, and, above all, by our distinguished countryman, Dr. J. Marion Sims, whose excellent treatise is far in advance of any work of the kind ever published. To him, and to Dr. James H. Bennet the world owes an immense debt of gratitude; to the former for the impor-

tant services which he has rendered to the operative surgery of the genito-urinary apparatus of the female; to the latter for his masterly work on inflammation of the uterus, originally issued in 1845, in which he was the first to make known to the physicians of Great Britain and the United States the diagnosis and treatment of the organic diseases of the womb, until then very imperfectly understood, and for the most part wretchedly mismanaged. To my former colleagues Professor Charles D. Meigs, for many years one of the chief pillars of this school, Professor Henry Miller, the distinguished obstetrician of Kentucky, and Professor Gunning S. Bedford, the able teacher and writer, great credit is due for their exertion to popularize the use of the speculum in this country. Professor White, of Buffalo, a gentleman ever alive to the progress of science and the interests of humanity, also deserves honorable mention in connection with this subject.

Ovariotomy, a conquest of modern times, is an American operation, first practiced in 1809, by Dr. Ephraim McDowell, of Danville, Kentucky. He performed the operation altogether about thirteen times, with a success highly flattering to his skill. After a Rip-van-Winkle sleep of nearly a quarter of a century, ovariotomy woke up one morning, and found itself suddenly famous. Revived by Mr. Clay, of Manchester, it has, mainly through the influence of his labors and writings, become one of the most common of the capital operations, and is almost universally acknowledged as one of the greatest triumphs of modern surgery. The mortality, now that the after-treatment is so well understood, is much less than formerly, the ratio being about one death in three cases and a half, thus comparing most favorably with the results of many of the more severe operations.

Valuable improvement has been effected in the treatment of puerperal peritonitis. Instead of copious abstractions of blood with the lancet, thereby draining the system rapidly of its vital fluid at a time when it can be ill-spared, most practitioners at the present day place their chief reliance upon the exhibition of opium in large and frequently repeated doses, and upon the application of leeches and of stupes of turpentine and laudanum to the abdomen. For the introduction of the opium treatment of this disease we are mainly indebted to Professor Alonzo Clark, of New York.

The practice of midwifery, properly so called, has experienced many salutary changes. The use of anæsthetics, and a better comprehension of the powers of nature, have greatly simplified the duties of the accoucheur, and have furnished him with more enlightened views of the mechanism of parturition. The forceps, that "noble instrument," to use the designation of Chapman, the original inventor, were seldom employed thirty-five years ago, except in cases of very tedious labor, and even then comparatively infrequently, nature being generally regarded as fully competent to the task of expelling the child without such aid. In a long practice of this kind, at one time quite extensive, I never had occasion to use the forceps in a solitary instance among my own patients, and a still-born child, from protracted retention of the head, was one of the rarest of occurrences. Now almost every physician, young or old, ignorant or educated, applies the instrument if the labor is at all tedious. In a recent medical journal, Dr. Hardie, of Scotland, is stated to have applied the forceps in twenty-eight out of one hundred cases of labor, simply to abbreviate anxiety and pain. Of the propriety of such a procedure, it is not my business here to express an opinion. The able gentlemen in charge of this department will, during the course of the winter, afford you all the light you may require upon the subject. I may, however, be pardoned for expressing my conviction that a more cautious reserve in the use of this instrument—an instrument that may be wielded for evil as well as for good—would conduce alike to the interests of humanity and the credit of obstetric practice. The advocates of the employment of the forceps as a prophylactic measure to save the child, and thus prevent the ill effects that might arise from delay, consitute, unfortunately, as it seems to me, a very numerous and influential class at the present day.

Until recently, great difficulty was frequently experienced in effecting reduction of the umbilical cord in cases of prolapse. The operation is now, thanks to Professor Gaillard Thomas, of New York, a very easy one, all that is necessary being to place the parturient female upon her knees and elbows, so as to throw the breech beyond the level of the rest of the body, when, by a little manipulation, the object may promptly be attained. By a similar expedient, Dr. E. R. Maxson, of the State of New York, has readily succeeded in converting shoulder into natural presentations.

Midwifery, in the latter part of the last century, was taught by Smellie, of London, in four lectures at 10s. A paper lantern, suspended at the door, served to direct the young aspirant after

obstetric honors to the amphitheatre of the learned professor. When the University of Pennsylvania was organized in 1764, no special provision was made for teaching this dignified and important branch of the healing art, and it was not until 1812, that it was considered worthy of holding a distinct place in the curriculum of the institution, known as the mother of American medical schools. The fact is, the practice of midwifery was long regarded by many of the leading medical men of the country as a positive degradation.

Great improvement has taken place in the physical and medical treatment of children. I well recollect the time when these little creatures were looked upon, apparently, as if they were absolutely destitute of the ordinary qualities of our nature; as if they were hardly human beings. Their early education was shamefully mismanaged; and their diseases, generally ill understood, were treated in the most harsh, cruel, and unscientific manner. Overdosing, ill-ventilation, and underfeeding, were the order of the day. It often made one's heart ache to see these little starvelings in their mothers' and their nurses' arms, looking like so many picked chickens, destitute of flesh and blood, fed upon calomel, and deprived of proper food and drink. One of the greatest discoveries of modern times is that children have stomachs!

In surgery, in all its branches and ramifications, not only great advances, but vast improvements have been made; improvements as brilliant as they are honorable to the genius, intelligence, and enterprise of their authors. A mere glance at this subject must suffice for this occasion.

In 1824, Civiale performed, for the first time, the operation of lithotripsy—improperly called lithotrity by our cousins across the waters—and from that period until his death, on the 13th of June last, he employed it upon upwards of sixteen hundred persons, with what result has not, thus far, transpired. Although Gruithuisen, a Bavarian physician, had, in 1813, called the attention of the profession to the practicability of crushing stone in the bladder without a resort to the knife, yet to the French surgeon, who was for upwards of a third of a century the acknowledged leader in this field of practice, is mainly due the merit of having brought the operation to its present degreee of perfection. This is not the place for an account of the manner of executing the operation, for a comparative view of its statistics, or of the estimation in which it is held by the profession. It is sufficient to add that its claims have been fully settled, and that it justly ranks among the acknowledged triumphs of surgery.

In lithotomy, the gorget, the favorite instrument of Physick, Gibson, and Dudley, has been superseded by the knife, and the operation, as now generally performed, is, in every respect, more simple than it was forty years ago.

The treatment of aneurism has been much improved, and rendered less dangerous to limb and life. The Hunterian operation, which, taking all the arteries together, furnished an average mortality of about one in four, is now comparatively seldom performed; mechanical and digital compression, forced flexion, and other processes, having taken the place of the ligature. For the revolution—for so it may justly be termed—which has been thus effected, all honor is due to the Dublin surgeons, particularly to Hutton and Bellingham, the latter of whom, in a short tract issued in 1847, was the first to point out, upon correct and scientific principles, the manner in which compression acts in curing the disease.

Acupressure, devised a few years ago by Sir James Y. Simpson, as a substitute for the ligature, which has so long enjoyed the confidence of surgeons as a means for preventing and arresting hemorrhage, is a contrivance the precise value of which is still undetermined. Much has been said and written in commendation of it, especially by its ingenious inventor; and in a monograph published within the present year by Professor Pirrie and Dr. Keith, of Aberdeen, numerous cases are related illustrative of its great advantages, with an expression of the hope that it will, ere long, come into general use. I have myself, however, no idea that it will ever entirely, or even in any considerable degree, supersede the employment of the ligature. When the prejudice incident to the introduction of all novelties shall have subsided, the profession will be better able to form an unbiassed judgment of its real utility.

There are, as is well known, various articles of the materia medica, endowed with hemostatic properties, but all these are as nothing compared with the wonderful effects of subsulphate of iron, or Monsel's salt, so-called after a chemist of Bordeaux, who was the first, a few years ago, to call attention to the subject. Having employed this substance in numerous instances, I am thus able to bear testimony, from personal experience, to its astonishing virtues. It has already saved many lives.

The treatment of syphilitic diseases has undergone many changes. Mercury, formerly so generally and so copiously administered for the

relief of primary and secondary symptoms, is now rarely given, except in the hard variety of chancre, in which the induration obstinately resists the ordinary measures, or the phenomena are such as to justify the belief that the virus is still insidiously at work. The secondary accidents, at least in my own hands, commonly yield to the ordinary antiphlogistic remedies. For the cure of the tertiary variety of the complaint the iodides, as they are denominated, introduced to the notice of the profession by Mons. Ricord, of Paris, have proved most effectual, especially when, as has long been my practice, they are combined with a minute quantity of bichloride of mercury, the very mildest and most innocuous of all the forms of that important salt. The inoculable character of secondary syphilis, formerly so strenuously denied, is now generally admitted, while the duality of chancre, a subject of so much angry discussion during the last fifteen years is still a mooted question.

The treatment of cancer stands precisely where it did forty years ago. While our knowledge of the histological and microscopical characters of the disease has been vastly extended by modern research, our means of arresting and curing it are as impotent as ever. The treatment of cancer by the hypodermic injection of acetic acid, introduced a short time ago by Mr. Broadbent, of London, and from which so much benefit had been anticipated, has signally failed; and there is at present no reason to believe, from what is known of this horrible malady, that science, in its onward progress, will throw any useful light upon its mode of management.

[To be continued.]

Negro Endurance.

In Binghamton, N. Y., 13th instant, a negro descended a well about forty feet deep, to repair it, and when at a depth of twenty-five feet the earth and stones caved in, burying him alive. Workmen were hired to dig him out, but after sixteen hours' labor, just as they saw his head, the earth caved in again, and the men, weary and discouraged, left him to his fate and went home to rest. A carpenter then volunteered, and first dug a hole down to the negro's head into which hole he inserted a box, through which the buried man could breathe. Propping the sides of the wall with boards, to prevent further caving, he dug out his man after seven hours' labor—in all twenty-three hours from the time of the accident—alive and unhurt, though exhausted from bearing the weight of earth and stones.

Reviews and Book Notices.

The Physicians' Diary, Monthly, Semi-Annual, and Annual Journal and Cash-Book, (combined.) By James O'Connor. Second Edition, Revised. Philadelphia: published by J. L. Ribl, M.D., and James O'Connor, No. 2009 Frankford Avenue. *Price*, $8.00.

We have often wished for some skilful bookkeeper to devise a set of books for physicians, which would combine the accuracy of the Italian method with the simplicity of single entry. The difficulty of the undertaking was such that we had little hope of seeing it done. But in this excellent production of Mr. O'Connor we have not only an account book of the greatest simplicity and absolute accuracy, but a statistical record as well, and it fully meets all the ends for which it was designed.

The book is large quarto, the first eighty-nine folios ruled for a "Diary and Monthly Journal," under the following heads: 1. Name. 2. Residence. 3. Occupation. 4. Days of Month, (each with a separate line.) 5. Total Visits. 6. Rate per Visit. 7. Amount. 8. Office and Special Charges. 9. Total Amount. 10. Date of Payment. 11. Amount Paid. 12. Patient's Name. 13. Disease. 14. Births. 15. Date of Birth. 16. Name of Child. 17. Date of Death.

In the second half of the book is a "Semi-Annual and Annual Journal and Cash Book." In this the accounts from the Diary are journalized and posted by simply entering the number of visits, rate per visit, amount, balance brought forward, total due, date and amount of payment, deductions made, and reference to diary folio, each in an appropriate column.

At the end, forms are given for "Statistics from Ledger" for each year, which briefly sum up both financial matters, births, (sex, presentation, instrumental deliveries,) and deaths. The volume is bound solidly in first-class calf, with Russia-leather tips, and is of first quality laid paper. It will keep the accounts of a physician in very extensive practice for at least four years, and with less writing, less liability to error, and more clearly than any other method we have ever seen. We venture to say that no one who purchases it will regret the investment.

—— The latest accounts from St. Thomas report that fever in a malignant form prevailed there, and that there had been a number of cases of cholera.

Medical and Surgical Reporter.

PHILADELPHIA, FEBRUARY 1, 1868.

S. W. BUTLER, M. D., & D. G. BRINTON, M. D., *Editors.*

ADVANCE PAYMENT!

We would remind subscribers that henceforth we must insist on ADVANCE PAYMENT. Consequently, we shall very soon cease sending the REPORTER to those who do not indicate their desire to continue taking it by communicating with us. We have now many thousand dollars due us on old subscriptions, and for the past several months, have wasted much time and money in trying to settle up these accounts. We must avoid this in the future, and the *only* way to do it is to conduct the REPORTER on the cash principle, just as our great successful daily papers and literary magazines are conducted. We will then know just where we are, and not be at the weekly expense of printing and sending out copies for which we have to pay, though we may never receive anything for them. For some time past we have been shortening our credits; now we propose to cut them off.

We anticipate only good results from this determination, and feel sure that all our subscribers will see that the advantage of such an arrangement will be mutual.

☞ In accordance with the above announcement, with this number we cease sending the REPORTER to those subscribers who have failed to remit for the current year. We regret to do so—but justice to ourselves and our enterprise, compel us to adopt that course, which, in the experience of all journalists, has proved to be only sound basis on which to conduct business.

DIPSOMANIA.

In the Twelfth Annual Report of the Board of Visitors of the Government Hospital for the Insane, among other interesting items, are some remarks on that variety of insanity which results from the abuse of alcoholic drinks. An unusual number of patients were admitted for this cause, usually from the better classes of society. The Report observes that it has now been a quarter of a century since the project of treating inebriates with the view of reforming their habits, in institutions exclusively devoted to their care, began to be talked of by some of the earnest and benevolent minds of the country. No such project was actually undertaken, however, till within the last half a dozen years; and the two or three existing establishments of the kind appear to have achieved only a very moderate measure of success in curing inebriety. They have, without doubt, been of considerable service to families in caring for inebriates for short periods, and relieving them from the immediate effects of a debauch. The radical defect in the system of treating this class of persons, now and hitherto pursued, is the absence of a legal, coercive detention, and an absolute abstinence from drink for a sufficient length of time to restore the impaired moral and intellectual powers, and to effect those physiological changes which are believed to attend the loss of the morbid, and the restoration of the natural appetite. The detention not having been legally coercive in such institutions, it has generally been of short duration, and not been attended with abstinence from liquor while it lasted.

"In the capacity in which we now write, it would be out of place for us to discuss the most proper modes, either of preventing inebriety, or of reforming inebriates, before the habit becomes confirmed. In relation to confirmed inebriates, however, we believe the desideratum of this particular time is a public judgment distinctly expressed in the State constitutions and laws, and expounded and enforced by the courts, that they are dangerous to themselves and others, and may and should be legally subjected to prolonged restraint, both for the protection of society and for their own protection and reformation. The discipline of an inebriate hospital should be coercive, and so understoood; but as its inmates are not convicts, however culpable they may be in the eyes of the moral law, the coercion may and should be disguised in every way that does not impair its essential efficiency. It was the practical error of the former treatment of the insane that it was too coercive, and time will probably show that it is the practical error of the system of treatment adopted in this latest enterprise, which has appeared in the great field of social philanthropy, that it is too voluntary. The fault referred to may not be wholly due to the inexperience of the conductors of a new enterprise. A more efficient system of reformatory restraint requires the authority of laws that have been enacted by one State only, and a court of that State have since decided that they are unconstitutional.

"The reports of the institutions for the insane, both of this country and Europe, show that intemperance is a common cause of insanity in its ordinary forms. The authorities also almost unanimously agree that inebriety sometimes

becomes an insanity—a settled mental alienation, arising from a morbid condition of the brain and nervous system, which is chiefly characterized by a total abandonment to extreme indulgence, regardless of the most sacred claims and pledges, and by more or less impairment of the moral and intellectual powers of the individual. Where inebriety has clearly become a concomitant, as well as a cause of insanity, the case should be treated in an institution for the insane. Such is the increasing practice in American institutions, and it accords with the proposition adopted by the 'Association of Medical Superintendents of American Institutions for the Insane,' at its meeting in Washington in 1866, and reaffirmed at its meeting held this year in Philadelphia, that 'all State, county, and city hospitals for the insane should receive all persons belonging to the vicinage designed to be accommodated by each hospital, who are affected with insanity proper, whatever may be the form or nature of the bodily disease accompanying the mental disorder.' Another proposition adopted at the same time, viz., 'That the facilities of classification or ward separation possessed by each institution should equal the requirements of the different conditions of the several classes received by such institution, whether those differences are mental or physical in their character,' meets the objections that have been made to associating dipsomaniacs with persons affected with other forms of mental disease. What we have said in relation to the continuance of the detention, and to the certain and entire abstinence of the inmates of an inebriate institution, applies equally to the treatment of dipsomaniacs in our institutions for the insane; and it is upon these two points, so essential to the success of any effort to reclaim inebriates or cure dipsomaniacs, that the public needs to be better instructed, and the most prevalent doctrines of the courts reformed. In a few weeks—sometimes in a few days—after the dipsomaniac is placed under restraint and proper treatment, the immediate effects of drinking pass off, and to a casual observer he appears to be entirely sane; and if he can then manage to appeal to a court of competent jurisdiction by the writ of *habeas corpus*, it will probably set him at liberty. He is not sane, however. His moral and intellectual powers are weak and deeply perverted; his nervous system is irritable and depressed; every fibre of his being seems to demand stimulants, and his thirst for them is intense, and the moment he is discharged he resorts to their use with the unreasoning directness with which the brutes obey their instincts. In permitting him to renew his self-destruction—a self-destruction that carries so much misery along with it—society rejects the guidance of science, fails to discharge its obligations to the individual and to itself, and reaps a harvest of ills which, in their severity and extent, are second to none that afflicts humanity. We know of no more distressing embarrassment than that which the families of inebriates often experience, who find themselves the anxious but passive victims of a terribly destructive evil which they have no power either to avert or remedy.

"The question may be asked whether restraint, prolonged for a year or two, will cure dipsomania. The answer of science is, we believe, that this form of insanity appears in this respect to follow the law of other forms of mental disease. It should be recollected that the cure is not undertaken in dipsomania till the disease has become chronic and deeply seated; but if there be no constitutional tendency to this or any other form of insanity, and the treatment is continued till the susceptibilities and strength both of the body and the mind become entirely normal, the cure is likely to prove permanent."

These enlightened views will recommend themselves to every thinking man. They offer the real solution to the great and increasing crime of intemperance; and we hope that they will receive the close attention of legislators.

The Honorable Secretary of the Interior mention this Institions and its efficient management in deservedly high terms. He remarks in his last annual report: "I have heretofore expressed my opinion of the admirable manner in which this institution has been conducted. Its present condition reflects the highest credit upon the accomplished superintendent and those associated with him in the administration of its affairs." This deserved compliment from so high a source, and the material aid which will result from it will, we hope, extend still wider the influence of the institution.

Surgeons on Railways.

Some months since we noticed the fact that a corps of surgeons had been appointed on the Atlantic and Great Western Railway. Will some of our readers, who are cognizant of the facts, give us some information in regard to the plan and its workings? Who is the surgeon in chief,

and how many surgeons are employed? How are they distributed, and what are their stated duties?

The Pacific Railway, which, in a few years will be the most important line on this continent, should at once organize a corps of surgeons for its extended line, and its almost equally extended branches.

It is well known that the public is indebted to Dr. E. S. F. Arnold, of Yonkers, N. Y., for urging this matter upon the attention of railway corporations; and we are glad that he is being rewarded, by seeing his ideas adopted by one of the grand links that will ultimately form the great chain of railways that will bind the Atlantic and Pacific together.

Notes and Comments.

Newspaper Reports of Surgical Operations.

We are in constant receipt of newspapers from different sections of the country containing notices,—veritable puffs, in some instances, of surgical operations performed by various surgeons. These reports, if made through the procurement of the surgeon, are *unprofessional.* But we are far from holding the surgeon responsible for the reports in every instance. We all know how anxious the local reporters of village newspapers—and city papers too, for that matter—are, to obtain items of interest to their readers, and *they* are, we doubt not, responsible in very many instances for these reports.

A paper published at Corning, N. Y., recently contained a report of the removal of an ovarian tumor, which we hope the operator was in no way responsible for. We trust that the better members of the profession will be conscientious on these ethical points, and give no occasion for offense to those who are inclined to be irregular.

Dr. Evans' Late Work.

In a review of Dr. Evans' (of Paris) late work on Sanitary Science, the *Continental Gazette* says:

"In tracing the origin of the Geneva Convention and the various European international societies of relief to the wounded—in giving the history of the operations of the Prussian and Italian Societies, and the Austrian Committees of relief during the German-Italian war of 1866—in presenting some of the more recent results of this great international sanitary movement—results obtained at the Exposition Universelle, and to which he himself so conspicuously contributed, Dr. Evans has furnished us with many new and most interesting facts. Although for a long time having had something more than an occasional interest in sanitary science as applied to armies in the field, we will frankly admit that before reading this book we had no just idea of the extent to which its more philanthropic teachings had been accepted by European Governments, nor of the spontaneous willingness, which seems ever ready to prompt both people and Governments to earnestly coöperate in the same charitable and humane purpose. If we have been pleased to learn how much was actually done for the soldier, during the war of 1866, by each of the powers engaged in that conflict, we have been still more pleased to learn from this book how generally diffused have been those sentiments of sympathy for the suffering, of generosity and sacrifice for the welfare of others, which are the noblest fruits of a Christian civilization."

Correspondence.

FOREIGN.

Letter from Paris.

(Continued from page 87.)

Paris, Dec. 22, 1867.

Muscular Contraction Simulating Coxalgia.

Dr. Philipeaux concludes a series of articles in the *Gazette de Lyon*, upon muscular contraction simulating coxalgia, with some useful reflections on the treatment of this disease.

Since it is most generally under the influence of chloroanæmia, nervous and menstrual derangements, it is first necessary always to institute a general treatment, in which hydropathy holds the chief rank.

Locally, all sorts of calmants may be applied when the pain is severe. Hypodermic injections of morphia, or inoculation, by a lancet, of a solution of neutral sulphate of atropia (one part in a hundred), generally relieve, and sometimes cure the patient. But the most reliable methods in all difficult cases, consist in frictions, massage, or forced manipulations of the limbs, sudden reduction, and the employment of apparatus for extension.

The friction should be made with all sorts of calming oils, with belladonna pomade, or chloroform liniment. But energetic manipulation gives the most satisfactory results, especially if the spasmodic contractions predominate. It occasions a full afflux of blood to the vessels of the

imb, and easier gliding upon each other of the different muscular fibres. The alternation of pressure and dilatation, which changes the habitual conditions of muscles, changes also their sensibility.

M. Estradere, in a monograph on the subject, enters into many details concerning the precise way of practising effective manipulations.

After a friction, all the contracted muscles of the thigh, from their inferior to their superior insertions, are thoroughly kneaded. The muscles of the gluteal region submit to the same process. Afterward, various small percussions are practised with the fist or palm of the hand, and also with rods. Finally, the operation is terminated by forced movements of the coxo-femoral articulation and of the muscles. The muscles are seized between the fingers, and twisted in a direction transversal to their fibres. Afterward, the operator fixes one hand on the basin, on the superior-anterior iliac spine, and with the other embraces the popliteal space, and raises the lower portion of the thigh, and, if possible, flexes and extends again the leg.

If muscular contractility coincides with an arthritis, it is necessary to defer the treatment till after the inflammation has subsided. Anæsthesia alone, or combined with the sudden manual reduction of the limb, is also of great service, especially if manipulation has been tried and proved unsuccessful. It is not enough to obtain those movements which can be easily executed. The operator must insist upon arriving at the most complete relaxation of the limb, and not arrest the forced movements until the thigh has been brought into forced extension. The reduction once obtained, the limb is placed in a starched gutter or bandage. Immobilization is required for a much shorter period than in real coxalgia.

Among apparatus for local and graduated extension, M. Philippeaux refers with much approbation to that employed by Dr. Wm. Harris, of Philadelphia, and Dr. Sayre, of New York.

The Calabar Bean.

A memoir by Dr. Watson, of Glasgow, upon the Calabar bean, has been justly deemed of sufficient interest to be reproduced in the *Gazette Hebdomadaire*.

The physiological part of the memoir is preceded by some interesting notes furnished by Dr. Thomson, formerly missionary to Calabar, concerning the natural history of the plant and its employment among the natives. These ingenious people utilize the poison as a means of detecting the guilt, or proving the innocence of persons accused of any crime, especially sorcery. A powerful dose is administered, both by the mouth and the rectum. If the accused is fortunate enough to vomit, he generally recovers, and his reputation henceforth remains spotless. If he dies, the judges rejoice that they have been able, by the same operation, to prove the guilt and punish the crime of a dangerous culprit.

The phenomena exhibited by the poisoned victims, as well as those observed in animals upon whom Dr. Watson experimented, consisted in paralysis of movement. The sensibility and intelligence remain intact. Sometimes, however, considerable cerebral excitement, almost amounting to delirium, was manifested by the accused submitted to trial at Calabar.

The paralysis was so complete that the victims, brute or human, fell immediately into a state of entire immobility. Dr. Watson injected five minims of the tincture into the flank of a guinea-pig. He was nearly instantly paralyzed in the right leg, and shortly afterward in the left. He crouched together, utterly unable to stir. When his ear was pinched, he cried, but did not budge; if a whip was snapped near him, he winked and trembled, but made no effort to avoid the blow. The Calabese generally rejected with obstinacy the persuasions of the missionaries to take an emetic, declaring that their innocence could not be sufficiently proved if they had recourse to other antidotes. Thus in all cases perception and reasoning were preserved. The other symptoms observed in the animals were contractions of the pupils, hyperæmia of all the secretions, especially shown by the abundance of saliva which ran from the mouth, finally, difficulty of respiration, and, if the dose had been high, death by asphyxia.

The paralysis is preceded by a trembling of all the muscles of the body, and itself commences in the posterior extremities. It gains successively the anterior limbs, and finally the throat and chest, producing death by arrest of the action of muscles involved in respiration.

Dr. Watson discusses the causes of the paralysis, which has in turn been ascribed: 1st, to a collapse of the circulation; 2d, to a comatose condition resulting from the influence of the poison on the brain; 3d, to a suspension of the will; 4th, to an annihilation or suspension of the action of the spinal cord.

But the first hypothesis is contradicted by the fact, that the pulse remains exceedingly strong, even at the moment that the animal is completely inert, and in some cases the heart beats for several minutes after death. Moreover, the anterior half of the body is under the influence of the

will after the paralysis has completely possessed the posterior.

Against the second theory is the absence of coma and preservation of the intelligence. The third was imagined by Dr. Christison, who experimented upon himself. He found that, when under the influence of the bean, he had great difficulty in lifting his arm, but after several unsuccessful efforts, he succeeded by sheer force of will. The experiment hardly proves that the will has been paralyzed.

Finally, Dr. Watson unhesitatingly adopts the view that ascribes the poisonous effects of the bean to its overwhelming influence on the spinal cord, of which it tends to completely annihilate the action. The paralyzed muscles are precisely those which are under the influence of the spinal cord; the paralysis is invariably bilateral; finally, death always arrives in consequence of paralysis of the mechanical agents of respiration. It would appear that the poison first acted on the lumbar portion of the cord, and gradually extended to the bulb. The circulation is arrested in the pulmonary capillaries, in consequence of the arrest of the respiration. The contraction of the iris depends on the fact that the radiated fibres of this muscle, which preside over its dilatation, are supplied by motor filaments passing through the ganglion ophthalmic, and joining the sensitive filament of the naso-ciliary nerve. When these are paralyzed, the motor ocular, distributed to the sphincter, acts alone and contracts the pupil.

This effect is more quickly and conveniently obtained by introducing into the eye a little piece of gelatine, impregnated with the tincture of the bean. It thus furnishes a convenient means of removing the effects of atropine. But this service is insignificant compared with that which, according to Watson, the Calabar bean is capable of rendering. Its paralyzing or *depolarizing* influence on the spinal cord, indicated its qualities as an antagonist of strychnine, and as a remedy in tetanus. Dr. Watson treated dogs and rabbits with strychnine and tincture of calabar, sometimes simultaneously, sometimes preceding the antidote by the poison, sometimes following it. The struggle between the strychnine and the Calabar bean, to obtain the ascendency in the organism, was extremely apparent, except in cases where the doses of the former had been so high as to produce its effects before the latter had time to act. A rabbit, to which six minims of tincture of the bean had been administered by hypodermic injection, resisted the influence of three minims of strychnine, given in the same manner; a dose which had instantly killed another rabbit unguarded by the antidote. Tetantic convulsions did not appear till three hours after the injection, and were speedily subdued by the administration of six minims more of the Calabar bean.

To these experiments, of which I refrain from giving the details, Dr. Watson adds the recital of two cases of tetanic convulsions successfully treated at the Royal Infirmary, by the Calabar bean. In the first case, some prodromic spasms had existed for six days, finally culminating in an intense trismus and opisthonos. Chloroform had been given to diminish the violence of the convulsions, but had not vanquished the disease. The patient, a girl of eleven, was purged and then treated with extract of Calabar bean, in the dose of the eighth of a grain every two hours. When two grains had been thus administered, the muscles of the patient relaxed, dorsal decubitus was assumed, the pupils slightly contracted, and the child fell into demicoma. The respiration was calm and regular, and the pulse full and rapid.

The treatment was suspended during two hours and a half, during which the pupil dilated, and a slight convulsive attack occurred, provoked by touching the patient. Five drops of the tincture were then given every hour during the night, and the patient appeared much better in the morning, but toward evening had a relapse. Half a grain of extract was then prescribed every hour. After a few hours, convulsions were mastered by the remedy, but during a fortnight the patient remained subject to slight attacks, and continued to be treated by small doses of the tincture. At the end of this time the cure was complete. In the second case, a boy of thirteen was affected with violent trismus and opisthotonos, and treated after purgation by five minims of the tincture every two hours. Each dose produced a marked effect in relaxing the muscles. In three days the patient could sit up in bed, and in a week was able to walk about.

It is necessary to exercise considerable skill, in order to so administer the drug as to maintain the system constantly under its influence, and at the same time to avoid poisoning by accumulation. Small doses, such as five minims of the tincture, require about twenty minutes to make their influence felt; this action lasts half an hour, and then ceases, so that if the permanent influence of the drug be required, it must be administered every forty minutes. The doses must be proportioned to the intensity of the disease.

Where the remedy has overpassed the limits of

safety, and symptoms of poisoning appear, it becomes necessary to remove the mucosities accumulated in the mouth and pharynx; to establish artificial respiration; to apply electricity along the course of the phrenic nerves, and mustard plasters on the spinal column; finally, to administer stimulating drinks, if the patient be able to swallow.

(To be continued.)

DOMESTIC.

Twin Births.—Interval of 36 Hours.

Editors of the Medical and Surg. Reporter:

In your number of January 4th, 1868, you publish the history of a case of twins, by Dr. O'Sullivan, which occurred "in his own practice," in which he states "that an interval of sixteen (16) hours elapsed between the birth of the first and second child, being exceeded but by one out of two hundred and forty (240) cases reported by Dr. Collins, of Dublin, of safe delivery of both children. I will report to you a case where an interval of thirty-six (36) hours occurred between the birth of the children, and both the children and mother are well.

On December 18th, 1850, an Englishman, by the name of John Bookham, called on me and said that on the morning previous, about 6 o'clock, his wife was taken with pains, and before he could get his children, five or six in number, out of the room, his wife was delivered of a child, and he was confident that there was still another. I went four (4) miles; arrived during the afternoon; found Mrs. B. free from pain, and feeling well; but on examining, found there was another child in the uterus. After waiting two or three hours for pains, gave small doses of ergot; the uterus soon responded to the ergot, and in a short time she was delivered of a healthy lively child. The last was a foot presentation. I have quoted this from my note book. I would add, that the last child was delivered after lights were lit in the evening, so that there must have been at least 36 hours interval between the births of the children.

O. H. Chipman, M. D.

Grand Rapids, Michigan, Jan. 15, 1868.

A New Muscle.

Editors Medical and Surgical Reporter:

In pursuing the study of Anatomy in the University of Pennsylvania, I met with a small muscle that is such a rarity that I cannot forego describing it. A first glance might mistake it for one of those anomalous slips that are sometimes found in the axillary region, but a closer scrutiny will prove it to be a separate and distinct muscle.

It is composed of a fleshy belly, about four inches long, five-eighths of an inch wide, and three-eighths of an inch thick. It arises by a tendinous slip from the sheath of the trunk formed by the union of the fifth and sixth cervical nerves, and terminates in a tendon of about one inch in length, which spreads out and loses itself in the capsular ligament of the shoulder.

Relations. In front, scalenus anticus, sterno-cleido-mastoid, external jugular vein, clavicle, sub-clavius, pectoralis major and minor, coraco-brachialis and the short head of the biceps. Behind—scalenus medius, subscapularis and the head of the scapula. Above, anterior edge of trapezius, clavicle, subclavius, coracoid process of scapula and deltoid muscle. Below, brachial plexus of nerves and axillary vessels.

What part it could have performed in the economy, with such an origin, I am unable to tell. The biceps of the same arm (right) had a slip arising from the middle third of the humerus.

A. B. Stoops, Medical Student.

Philadelphia, Jan. 16, 1868.

News and Miscellany.

—— Dr. H. C. Dean, of Algonquin, Illinois, was drowned in Fox river on the 3d ult., while skating with a party of ladies and gentlemen.

CHANGES IN THE NAVY.

List of changes, etc., in the Medical Corps of the Navy, for the week ending January 25, 1868:

Surgeon P. Lansdale, to be detached from the Naval Rendezvous, Philadelphia, on the 1st proximo.

Surgeon J. McClelland, detached from the Marine Rendezvous, Philadelphia, on the 1st proximo, and ordered to Naval Rendezvous, Philadelphia.

Passed Assistant Surgeon E. D. Payne, detached from Naval Hospital Washington, D. C.

Passed Assistant Surgeon Geo. A. Bright, ordered to the Naval Hospital, Washington, D. C.

Past Assistant Surgeon J. M. Flint, detached from Naval Hospital, New York, and ordered to Naval Hospital, Chelsea.

Passed Assistant Surgeon Wm. S. Fort, ordered to the Naval Hospital, New York.

Acting Assistant Surgeon S. P. Boyer, ordered to duty in the Asiatic Squadron.

Surgeon C. Eversfield, Past Assistant Surgeon J. W. Coles, and Assistant Surgeon W. F. Terry, detached from U. S. Ship Minnesota, and await orders.

[Notices inserted in this column gratis, and are solicited from all parts of the country; Obituary Notices and Resolutions of Societies at ten cents per line, ten words to the line.]

MARRIED.

Brackett—Bolander.—Jan. 14, by the Rev. J. W. Healy, Dr. A. B. Brackett and Miss Laura Bolander, all of Chicago, Ill.

Church—Bragdon.—At the residence of the bride's mother in Lima, N. Y., Dec. 31, by Rev. Prof. S. A. Lattimore, of Rochester, Mr. William O. Church, of Wolcott, N. Y., and Miss Sarah E., eldest daughter of the late Dr. Bragdon.

Cooper—Suvad.—By Rev. E. J. Goodspeed, Jan. 15, Horace L. Cooper, M. D., of Aurora, Ill., and Miss Anna M. Suvad, of Chicago.

Dabbs—Dickson.—Jan. 21st, at Edgeworth, the residence of the bride's parents, by the Rev. James Allison, Mr. B. L. H. Dabbs, of Pittsburgh, and Sadie Q., daughter of Dr. John Dickson.

Erwin—Johnson.—At Mansfield, Ohio, Nov. 26th, by Rev. Mr. French, assisted by Rev. Dr. Gracey, of Pittsburgh, Dr. A. J. Irwin, of Fort Wayne, Ind., and Miss Kate Johnson, of Mansfield.

Kennedy—Witherspoon.—On the 23d of December, 1867, by the Rev. J. A. Crawford, Thomas Kennedy, M. D., and Mary Jane, eldest daughter of Wm. Witherspoon, Esq., all of Franklin co., Pa.

Magoffin—Mitcheltree.—Jan. 16th, at St. Andrew's Church, by the Rev. Wm. Preston, D.D., Dr. B. Magoffin, of Mercer, Pa., and Miss Maria Mitcheltree, of Allegheny city.

Peck—Pratt.—In West Troy, by Rev. Dr. Gregory, Jan. 15th, Solomon H. Peck, M. D., of Ithaca, and Miss Angeline R. Pratt, of Trumansburgh.

Reddick—Threlkeld.—Jan. 16th, at the residence of the bride's father, Dr. Wm. Threlkeld, by Rev. W. T. Moore, Mr. Jas. J. Reddick and Miss Ellie Threlkeld, both of Kenton co., Ky.

DIED.

Comegys.—In Cincinnati, Ohio, Jan. 15th, Cornelius Marion, son of Dr. C. G. and R. T. Comegys, aged 20 years.

Vanderbergh.—Jan. 23, at Rhinebeck, N. Y., after a long illness, Federal Vanderbergh, M. D., for many years a resident of New York city.

METEOROLOGY.

January.	13,	14,	15,	16,	17,	18,	19.
Wind	N. W.	N.	N.	N. W.	N.	N. W.	W.
Weather	Clear.	Cl'dy. Snow.	Cl'dy.	Clear.	Clear.	Clear.	Clear.
Depth Rain							
Thermometer.							
Minimum	7°	8°	12°	17°	12°	5°	10°
At 8, A. M.	15	17	25	22	21	19	18
At 12, M.	20	24	32	34	25	27	26
At 3, P. M.	19	22	28	33	28	29	26
Mean	15.25	17.75	24.25	25.50	21.50	20.	20.
Barometer.							
At 12, M.	30.5	30.5	30.1	30.	30.	30.3	30.5

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